



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

400 Seventh Street, S.W.  
Washington, D.C. 20590

**DEC 2 2004**

DOT-E 11850  
(SIXTH REVISION)

EXPIRATION DATE: October 31, 2006

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Members of Air Transport Association (ATA)  
  
(See Appendix A of this exemption for a list of ATA members)
2. PURPOSE AND LIMITATION: This exemption authorizes an alternative inspection program utilizing acoustic emission (AE) testing in lieu of that required in § 180.205 for certain DOT specification and non-DOT specification cylinders used as components in aircraft fire suppressant systems. This exemption provides no relief from any regulation other than as specifically stated herein.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.301(c) in that the marking requirements are waived; 180.205(c), (f), (g) and 180.215(b)(2) in that the acoustic emission test is performed in place of the hydrostatic test and the internal visual inspection.
5. BASIS: This exemption is based on the application of ATA dated October 5, 2004, submitted in accordance with § 107.109.

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6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Materials Description	Hazard Class/ Division	Identi- fication Number	Packing Group
Fire Extinguisher	2.2	UN1044	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a DOT 4DA or 4DS specification cylinder, or a cylinder manufactured in accordance with DOT Exemption E-5861, E-6071, E-7026, E-7945 or E-8495 that is fabricated from a stainless steel, Nitronic 40 alloy, 4130 steel or titanium used as components of aircraft fire suppression systems, having maximum service pressure of 900 psi. The cylinder contains Bromotrifluoromethane R13B1, 2.2, UN1009. In lieu of the hydrostatic pressure test and internal visual examination prescribed in §180.205(c), (f), and (g), each cylinder must be examined in accordance with the test procedures specified in the application for exemption on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA) and as prescribed in this exemption.

b. TESTING: Each cylinder must be externally inspected in accordance with § 180.205(f) and meet the requirements of this section before being AE tested. The AE processor threshold level must be set at not greater than 25 dB. A cylinder fails when any of the following occurs:

(1) A cylinder has a cluster containing 35 or more events. A cluster is defined as all events located within a circle on the sphere which has a radius equal to 15 degrees of arc of the great circle (0.262 times the radius of the sphere) of the sphere; or

(2) A cylinder which has a cluster containing 18 or more events and has a ratio, R, equal to 3.0 or greater. The ratio R is defined as following:

$$R=N2/N1$$

N1 = number of events which occurred in the temperature range of 110° F to 130° F

N2 = number of events which occurred in the temperature range of 130° F to test temperature (a temperature which corresponds to the minimum required test pressure for AE testing).

A cylinder which fails the visual inspection or the AE test, must be removed from service and stamped condemned as specified in § 180.205(i).

c. Equipment performance: The AE test equipment must be automated and capable of performing the following:

- (1) Pre and post system calibration using automated sensor testing (AST).
- (2) Starting and stopping the oven for proper pressurization of the cylinders during the test cycle.
- (3) Initiation and termination of the test cycle.
- (4) Collecting and analyzing the AE events during the test.
- (5) Determination of acceptance or rejection of a cylinder in accordance with the AE test criteria specified in paragraph 7.b. and the ATA application for exemption on file with OHMEA.

d. Personnel Qualifications and Responsibilities: Each facility where testing is to be performed must be under the managerial direction of a Senior NDT Review Technician.

- (1) A Senior NDT Review Technician must define the overall test program, provide supervisory training and technical guidance to operators, review and certify test results and maintain proof of qualifications for each "qualified tester". A Senior NDT Review Technician must have a Level III Certification in AE or UT, in accordance with the American Society for Nondestructive Testing (ASNT) Recommended Practice SNT-TC-1A and a thorough understanding of the AE testing and Hazardous Materials Regulations (49 CFR) pertaining to the qualification and use of DOT cylinders and this exemption. The Senior NDT Review Technician must submit an annual summary to the ATA and certify that

the AE program is being operated in accordance with the requirements of this exemption. The summary must include the test results for each cylinder tested and the name and qualification document of each tester for each location where AE testing is being conducted under this exemption.

(2) The person performing cylinder testing, the "qualified tester", must at the minimum be a qualified Level I, AE tester in accordance with ASNT-TC-1A. He may perform system startup, calibrate the system, and review and validate the test results. Each "qualified tester" must have written procedures for conducting inspections, for operation of equipment, valid copies of this exemption, the HMR and other reference material required by the applicable sections of § 180.205 and this exemption, proof of his qualifications and records of all tests performed under this exemption at the facility where testing is performed.

8. SPECIAL PROVISIONS:

a. USE: Persons may use the cylinders tested in accordance with the terms of this exemption for the transportation of those hazardous materials identified in paragraph 6 of this exemption provided no modifications or changes are made to the packages, all terms of this exemption are complied with, and a current copy of this exemption is maintained at each facility from which such reoffering occurs.

b. MARKING:

(1) The exterior of each cylinder passing retest under the provisions of this exemption must be marked as prescribed in § 180.213(d) and as required in the original manufacturing specification or manufacturing exemption. In addition, each cylinder must be marked with the letters AE following the year of the retest (example 01 xx 98 AE).

(2) The marking requirements of § 172.301(c) are waived.

c. APPROVAL OF AE FACILITY: Each retest facility for AE testing must be approved as provided in Subpart I of Part 107 of the HMR except that staff of OHMEA will perform the functions of the IIA until such time as OHMEA determines that qualified IIAs can assume the function.

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9. MODES OF TRANSPORTATION AUTHORIZED: Cylinders retested under this exemption may be transported by the modes authorized in the manufacturing specification or manufacturing exemption subject to the restrictions applicable to the hazardous material being transported.

10. MODAL REQUIREMENTS: The modal requirements are the same as set forth in the manufacturing specification or manufacturing exemption subject to the restrictions applicable to the hazardous material being transported.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- o Persons operating under the terms of this exemption must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

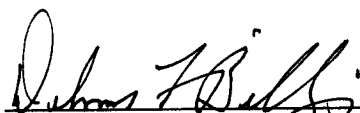
No person may use or apply this exemption, including display of its number, when this exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS:

a. Each ATA member that chooses to operate a facility under this exemption will provide the ATA with a listing of test facilities including the names of Senior NDT technicians and the names of "qualified testers" for each facility. The ATA must provide a listing of operating test facilities to The Office of Hazardous Materials Exemptions and Approvals annually.

b. Each holder (ATA member) is required to report any incident involving packaging failure or loss of packaging contents, while in transportation, to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incident involving the package and shipments made under the terms of this exemption.

Issued in Washington, D.C.:



*for* Robert A. McGuire  
Associate Administrator for  
Hazardous Materials Safety

**DEC 2 2004**  
(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.  
Attention: DHM-31.

Copies of this exemption may be obtained by accessing the Hazardous Materials Safety Homepage at <http://hazmat.dot.gov/exemptions> Photo reproductions and legible reductions of this exemption are permitted. Any alternation of this exemption is prohibited.

PO:MToughiry/dl

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## ATA MEMBER AIRLINES

ABX Air, Inc.  
145 Hunter Drive  
Wilmington, OH 45177  
937-382-3391 (phone)

Alaska Airlines, Inc.  
P.O. Box 68900  
Seattle-Tacoma International Airport  
Seattle, WA 98168-0900  
206-433-3200 (phone)

Aloha Airlines, Inc.  
P.O. Box 30028  
Honolulu, HI 96820  
808-484-1111 (phone)

America West Airlines, Inc.  
4000 E. Sky Harbor Blvd.  
Phoenix, AZ 85034  
602-693-0800 (phone)

American Airlines, Inc.  
P.O. Box 619616  
DFW Airport, TX 75261  
817-963-1234 (phone)

ASTAR Air Cargo, Inc.  
Two South Biscayne Blvd.,  
Suite 3663  
Miami, FL 332131  
305-982-0500 (phone)

ATA Airlines, Inc.  
P.O. Box 51609  
Indianapolis International Airport  
Indianapolis, IN 46251  
317-247-4000 (phone)

Atlas Air, Inc.  
2000 Westchester Ave.  
Purchase, NY 10577  
914-701-8000 (phone)

Continental Airlines, Inc.  
1600 Smith Street  
Houston, TX 77002  
713-324-5000 (phone)

Delta Air Lines, Inc.  
P.O. Box 20706  
Atlanta, GA 30320  
404-715-2600 (phone)

Evergreen International Airlines,  
Inc.  
3850 Three Mile Lane  
McMinnville, OR 97128  
503-472-0011 (phone)

FedEx Corporation  
952 South Shady Grove Road  
Memphis, TN 38120  
901-369-3600 (phone)

Hawaiian Airlines  
P.O. Box 30008  
Honolulu International Airport  
Honolulu, HI 96820  
808-835-3700 (phone)

JetBlue Airways Corp.  
118-29 Queens Blvd.  
Forrest Hills, NY 11375  
718-286-7900 (phone)

Memo Worldwide Forwarding  
One Emery Plaza  
Vandalia, OH 45377  
937-415-7500 (phone)

Midwest Express, Inc.  
6744 S. Howell Avenue  
Oak Creek, WI 53154  
414-570-4000 (phone)

Northwest Airlines, Inc.  
2700 Lone Oak Parkway  
Eagan, MN 55121  
612-726-2111 (phone)

Polar Air Cargo  
2000 Westchester Ave.  
Purchase, NY 10577  
914-701-8000 (phone)

Southwest Airlines Co.  
P.O. Box 36611  
Love Field  
Dallas, TX 75235  
214-904-4000 (phone)

United Airlines, Inc.  
P.O. Box 66100  
Chicago, IL 60666  
847-700-4000 (phone)

UPS Airlines  
1400 N. Hurstbourne Parkway  
Louisville, KY 40223  
502-329-3000 (phone)

US Airways, Inc.  
2345 Crystal Drive  
Arlington, VA 22227  
703-418-7000 (phone)

Associate Members

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Paseo de la Reforma 445, 12<sup>th</sup> Floor  
Mexico City, DF, 06500 Mexico  
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Air Canada  
P.O. Box 14000  
Air Canada Center  
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Canada H4Y 1H4  
514-422-5000 (phone)

Air Jamaica Ltd.  
72-76 Harbour Street  
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876-922-3460 (phone)

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Xola 535  
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